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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER ROBINSON, LAUREN E				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/581,056

Applicant(s)

FLEURY ET AL.

Examiner

LAUREN ROBINSON

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 16-31 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-15 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restriction

Applicant's election without traverse of claims 1-15 and 32 in the reply filed on November 19, 2009 is acknowledged.

Abstract

The abstract is objected to for the following: the sentence "Figure for the abstract: no figure" should be struck from the abstract page.

Claim Objections

Claims 6-15 and 32 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can not depend from a previous multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 6-15 and 32 have not been further treated on the merits.

Claim Rejections-35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

1. Claims 1 is rejected for containing a broad limitation/range, together with a narrow limitation/range. According to the MPEP, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth

the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

For example, claim 1 recites the broad recitation "a transparent substrate" and the claim also recites, "especially made of glass" which is the narrower statement of the range/limitation. It is unclear as to whether the claim requires the substrate to be glass or whether this is only preferred. For applying prior art, the claim is interpreted as not requiring glass.

Regarding claim 2, the limitation "when it is associated with at least one other substrate to form a glazing assembly, this glazing assembly has a selectivity ≥ 2 ", this is considered indefinite. The instant claims are directed to a transparent substrate with a thin film stack thereon. The limitation noted above in claim 3 is not considered to be a positive recitation given that it is stated in an optional manner (use of "when"). Further, it is not clear whether applicant is attempting to claim an intermediate or a final product. It is suggested to claim a "Glazing assembly" that incorporates claim 1 in addition to the at least one other substrate etc.

2. Regarding claims 2-5, it is not clear to what "it" is referring. Is this the thin film stack? Is it the substrate? Is it a combination of both? Please clarify.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as anticipated by Woodruff et al. (US 6,353,501) already cited by applicants.

Regarding claim 1: Woodruff teaches a transparent substrate made of glass (Col. 2, lines 25-26) provided with a thin film stack. The stack comprises a plurality of functional layers with at least three silver functional layers (Col. 6, lines 40-65) and the stack has a resistance of less than 1.5 ohms per square (Col. 9, lines 43). Although the reference does not specifically teach the transformation at 500 degrees C, the examiner notes that applicants' claim recites that the substrate "may" undergo such a transformation., This is considered to be optionally present and not necessary within the prior art. Additionally, the article of Woodruff is considered to be capable of undergoing at least one transformation operation given that it meets the structural limitations of the claim as stated above (**Claim 1**).

Regarding claims 2-4: While Woodruff fails to disclose the light transmission ,selectivity when associated with another substrate in the formation of a glazing

assembly, or the combination of transmission and resistance as claimed, it would have been expected to be present. For example, Woodruff teaches applicants' invention of claim 1, etc. As applicants' and Woodruff' structures are the same and even the same properties are taught therein, it would be expected by one having ordinary skill that all other properties will also be the same. Therefore, absent an evidentiary showing to the contrary, it would be expected that applicants' limitations of claims 2 and 3 would be necessarily present (**Claims 2-4**). Additionally, regarding claim 3, as stated above, the limitation of "when it is associated..." is not considered to be a positive limitation.

4. Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tachibana et al. (WO 00/40402), English machine translation enclosed herein.

Regarding claim 1: Using the English machine translation, Tachibana et al. teach a transparent substrate such as glass (0002) provided with a thin-film stack comprising a plurality of functional layers (0059-0066). The thin-film stack comprises at least three silver-based functional layers wherein the stack has a resistance of less than 1.5 ohms per square (0060, Table 9). Although the reference does not specifically teach the transformation at 500 degrees C, the examiner notes that applicants' claim recites that the substrate "may" undergo such a transformation. This is considered to be optionally present and not necessary within the prior art. Additionally, the article of Tachibana is considered to be capable of undergoing at least one transformation operation given that it meets the structural limitations of the claim as stated above (**Claim 1**).

Regarding claim 3: The transparent substrate with the stack is taught to have a transmission of greater than 40% (Table 9). While the claimed selectivity is not explicitly

disclosed, it would be expected by one having ordinary skill to be present. Specifically, as Tachibana discloses above the same structure as claimed by applicants' along with some corresponding properties, one having ordinary skill would expect all properties to be the same. Absent an evidentiary showing to the contrary, it would be expected by one having ordinary skill that the claimed selectivity will be present. Additionally, regarding claim 3, as stated above, the limitation of "when it is associated..." is not considered to be a positive limitation. **(Claim 3).**

Regarding claims 4-5: Tachibana also teaches that the resistance is less than 1.1 ohms per square (Table 9) **(Claim 4)** and the stack comprises four silver layers (Table 9) **(Claim 5).**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as obvious over Woodruff et al. (US 6,353,501) as applied to claims 1-3 above.

Regarding claim 4: Woodruff teaches applicants' invention of claims 1-3 wherein the resistance is taught to be 1.5 ohms per square or less and it is expected that the transmission properties will be the same as those claimed. The examiner notes that the resistance being less than 1.5 ohms per square overlaps applicants' claimed range

providing a prima facie case of obviousness (MPEP 2144.05). For example, Woodruff teaches that the resistance changes emission levels (Col. 9, lines 38-40). From this, one having ordinary skill at the time of invention would have found it obvious to adjust the resistance to any value below 1.5, including less than 1.1, depending on desired emission results (**Claim 4**).

Regarding claim 5: Further, Woodruff while not specifically disclosing “four” silver layers, they do teach at least two silver layers (Col. 2, lines 66-67) which overlaps applicants’ four layers providing a prima facie case of obviousness. For example, it is well known in the art that with additional silver IR reflecting sequences, the optical properties will change. From this and from what is within Woodruff, one having ordinary skill at the time of invention would have found it obvious to adjust the amount of layers to any amounts of 2 or more, including 4, depending on desired optical results. (**Claim 5**).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being obvious over Tachibana et al. (WO 00/40402) as applied to claims 1 and 3-5 above.

Tachibana discloses applicants’ invention of claims 1 and 3-5 and above within their table 9. However fails to disclose this stack having applicants’ greater than 70% transmission. However, such a stack would have been obvious.

For example, Tachibana discloses, separately from the example relied upon above (table 9), that the transparent glass substrates can be provided with thin-film stacks comprising at least three silver based functional layers (0061) wherein the

resistance can be between 0.5 and 3.5 ohms per square (0072) and the transmission can be at least 40% (0072).

Although no specific example having all of these features is presented, one having ordinary skill in the art would have found that Tachibana suggests such a structure and the overlapping property values provides a prima facie case of obviousness for greater than 70% transmission. Specifically, the laminate of Tachibana is meant for window glass for automobiles, buildings and/or plasma displays and one having ordinary skill would recognize that for these products higher transmission is beneficial. For example, increasing transmission as close as possible to 100%, will allow for greater visibility to a driver in an automobile allowing for safety. For the above reasons, it would have been obvious to one having ordinary skill in the art at the time of invention to use any transmission greater than 40%, even high transmission of greater than 70%, to obtain desired visibility/safety **(Claim 2)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAUREN ROBINSON whose telephone number is (571)270-3474. The examiner can normally be reached on Monday to Thursday 6am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LAUREN ROBINSON/
Examiner, Art Unit 1794

/Jennifer C McNeil/
Supervisory Patent Examiner, Art Unit 1794